



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/575,342 | 05/19/2000 | Jouni Rapakko | 460-009420-US(PAR) | 9989 |

7590

05/05/2004

Clarence A Green
Perman & Green LLP
425 Post Road
Fairfield, CT 06430

EXAMINER

VU, TUAN A

ART UNIT

PAPER NUMBER

2124

DATE MAILED: 05/05/2004

13

Please find below and/or attached an Office communication concerning this application or proceeding.

3

25

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/575,342 | RAPAKKO ET AL. | |
| | Examiner | Art Unit | |
| | Tuan A Vu | 2124 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 2/26/2004.

As indicated in Applicant's response, claims 8, 14-16, 21, 28 have been amended.

Claims 1-28 are pending in the office action.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1, 15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a "useful, concrete, and tangible result" be accomplished. An "abstract idea" when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a "useful, concrete and tangible result".

Claims 1 and 15 recite a method claims with means for loading, starting and executing program modules; but fail to comprise step actions leading to accomplishing a concrete, tangible, and useful result. As structured, the claim comprise only some means designed for some purported but non-elaborated actions, and fail to list step actions with specifics for accomplishing the method as purported in the preamble (i.e. from start of claim to '...modules in the electronic device'). Some descriptive elements are seen to further elaborate the context (e.g. description after '... wherein') of said means; but those actions do not amount to listed actions expected to

Art Unit: 2124

comprise the method claim as purported. Hence, the claims have no steps that would lead to accomplishing a concrete, tangible, and useful result; and only amount to an abstract idea; hence are rejected for being non-statutory subject matter.

The claims 2-6, 16-20 are also rejected for dependent of these rejected claims.

Claim Objections

4. Claims 1 and 15 are objected to because of the following informalities: the claims are recited as a method claim with means for loading, starting and executing program modules but do not list any method steps to implement the operations listed above. The claims recite more descriptive elements (e.g. description after '... wherein') to further elaborate on the elements enclosed in the means above; but since this is a method claim, there is no clear listing of step actions usually expected from a method claim (e.g. step listing enclosed in a '... comprising:' context), each step with specific description that enable the method claim to accomplish a particular application as recited in the preamble. The claims as recited comprise 'means for ...' and this is rather more appropriate with apparatus claim than for method claims. Appropriate correction is required.

5. Claim 7 and claim 21 are objected to because of the seemingly obscure and redundant presence of one limitation phrase. The element recited as ', and the means for loading the user interface software,' (lines 7-8) does not seem to fit anywhere in the semantic of the rest of the claims; and is observed as though it is disrupting the otherwise correct grammatical flow of the claim.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2124

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 7, 15, 21, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 21 are rejected because of the seemingly obscure and redundant limitation. The element recited as ‘, and the means for loading the user interface software,’ (lines 7-8) does not seem to fit anywhere in the semantic of the rest of the claim; and is adding nothing to the flow of the claim and is devoid of action step that would further specify its scope. It will be treated as though it were not part of the claim.

Claim 15, 21, 28 recite respectively limitations such as "said loading is capable of being stopped" (claim 8, line 13), “means capable of stopping the loading” (claim 21, lines 10-11), and “loading is capable of being stopped” (claim 28, line 13). The claims should specify whether a limitation is actually performed or not performed. The phrase “is capable of” does not indicate whether a definite action is being performed so as to specify the extent or effective scope of a practical feature of the invention. Examiner will interpret this as if the limitation reads as if the step of ‘loading’ is not necessarily to be stopped.

As a consequence, claims 8-13, and 16-28 are also rejected for being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

Art Unit: 2124

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shih et al., USPN: 6,405,362 (hereinafter Shih), in view of Garney, USPN: 5,319,751 (hereinafter Garney).

As per claim 1, Shih discloses a method for loading operating software application from an expansion card in an electronic device (e.g. col. 3, lines 8-18) comprising means for loading, starting and executing program modules in the device;

wherein the expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);

wherein the loading of the application is done in 2 phases (Fig. 2, 3);

wherein in the first phase, the loading and start-up of the basic module (e.g. *event monitor* - Fig. 2); and in the second phase the loading and start-up of the software application module (e.g. step 320 – Fig. 3), and the second phase is conducted when the expansion card is coupled to the electronic device (Fig. 3); and

wherein the basic module receives a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the software application is user interface software. But Shih discloses software applications on hand held devices or user event-driven applications, each of them necessarily include user interface modules (e.g. col. 6, lines 5-32); hence has implicitly disclosed that the software application to be loaded is an user interface software.

Nor does Shih specify that said user interface software is divided in a basic module and a user interface module. The loading and activation of software being divided into a basic

Art Unit: 2124

operating system level module and a main software module was a known concept in the art of computer booting and loading of operating system components or upgradable software; and this has been applied to removable device-resident software being coupled to host computer system targeted to load up such additional software or O.S. components. Garney, in a method to activate/configure a processing device with software loaded from the removable resources being attached thereon analogous to the expansion card loading by Shih, teaches the software loading being done in 2 parts, the first part being a stub for setting basic operating system configuration for preparing the host machine to incorporate the second part on the software which is loading and activation the content of the software in the removable card (Fig. 6-12). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to provide a software loading method as suggested by Shih with a 2 parts just as taught by Garney just so to prepare the host target system with first software basic (Garney's stub) component to incorporate a second and main component of the software for which more resources are required and yet assure secure control and operation of the incorporation of this main software component in that less resources would be used to forestall conflicts by which where more resources could be otherwise jeopardized.

As per claim 2, Shih further teaches a method wherein the first basic module controls the execution of the second phase (step 315 – Fig. 3).

As per claim 3, Shih further teaches application programming interface and device driver to arrange communication between user interface software and expansion card (Fig. 3 – Note: O.S. device driver recognition cooperating with shell or windows API for signaling an hardware insertion is implicitly disclosed); said basic module being signaled on the coupling of the

Art Unit: 2124

expansion card from device driver for effecting the loading and start-up of the software user interface module (e.g. col. 6, line 20 to col. 8, line 32).

As per claim 4, Shih does disclose wherein coupling an expansion card to a electronic device an interrupt signal is produced with OS examination of cause therefor; and information on the coupling is transmitted to a device driver (e.g. col 7, lines 30-50 – Note: Shell notifying a event monitor to allocate immediate resource for handling a signal is equivalent to interrupt signal handler for addressing hot insertion of card).

As per claim 5, Shih discloses wherein the decoupling of an expansion card halts processing of a user interface module without interrupting the basic module (Fig. 2,3 – Note: event monitor is required to remain functional even if card is removed for signal removal event).

As per claim 6, Shih discloses that memory is allocated for a user interface module when said module is loaded and said memory is deallocated when an expansion card removed from an electronic device (e.g. col. 7, lines 19-23, 62-67)

As per claim 7, Shih discloses a electronic device comprising means for loading a application software in an electronic device, means for coupling an expansion card in a releasable manner in electronic device; and means for loading, starting and executing program modules in the device (Fig. 2,3); and the loading of the application being arranged to be executed when the expansion card is coupled to the device; wherein a basic module receives a signal about attaching the expansion card and loads the software application (Fig. 3).

But Shih does not explicitly disclose that the application software is a user interface software; but this limitation has been addressed in claim 1 above.

Nor does Shih disclose that the user interface software is divided in a basic module and a user interface module; but this limitation has been addressed in claim 1 above using Garney.

As per claims 8-9, these are the apparatus claims corresponding to the method of claims 2-3, respectively. The claims are rejected under the same arguments as cited above, with Column 2, Line 1 referencing the apparatus (information process apparatus).

As per claims 10-11, these claims represent an apparatus performing a method corresponding to the method of claims 3 and 4, hence are rejected using the same arguments as cited above in the respective claims (Fig. 3 – Note: O.S. device driver recognition cooperating with shell or windows API for signaling an hardware insertion is implicitly disclosed ; col. 6, line 20 to col. 8, line 32; col 7, lines 30-50).

As per claim 12, Shih discloses communications with bus and multi-machine environment (Fig. 1); and Garney teaches that the expansion card comprises a transmitter/receiver unit and power amplifier (e.g. *device driver* - col.1, li.60 to col.2, li.4). At the time of the invention, it was a well-known concept to one of ordinary skill in the art that a power amplifier is commonly used in the output stage of a signal producing device to isolate output impedance. Additionally, it was also well-known in the art that a driver acts as transmitter/receiver unit to control components of a specific computer resource, and that card like modem or game adapter card come with a speaker being amplified by a power amplifier. Hence if Garney (in combination with Shih) does not already provide a high frequency power amplifier at the output stage of the transmitting unit, it would have been obvious to a person of ordinary skill in the art to modify Garney's expansion card so that it does come with one such

Art Unit: 2124

amplifier to generate audio or signal with frequencies capable of being amplified for securing distance transmission of signal or impedance matching purposes.

As per claim 13, Shih further teaches an apparatus for performing the method of claim 1 wherein the electronic device is a data processor (e.g. col. 6, lines 5-32).

As per claim 14, Shih further teaches an storing means for performing the method of claim 1 (e.g. *memory* - col.2, li.2; Fig. 12); all whose limitations having been addressed above.

As per claim 15, Shih discloses a method for loading a application software of a expansion card, comprising means for loading, starting and executing program modules in the device;

wherein the expansion card can be coupled in a releasable manner to the device (Fig. 1; 3);

the loading of the application software is done in 2 phases (Fig. 2, 3);

wherein in the first phase, the loading and start-up of the basic module (e.g. *event monitor* - Fig. 2); and in the second phase the loading and start-up of the software application module (e.g. step 320 – Fig. 3), and the second phase is conducted when the expansion card is coupled to the electronic device (Fig. 3);

Shih does not explicitly disclose that such loading can be stopped between the first phase and the second phase, but this is implicitly disclosed because any event like abrupt loss of power or mechanical trauma to the electronic device or power supply can trigger the loading process to be interrupted.

Art Unit: 2124

Shih does not explicitly disclose that the software application is an user interface software; nor does Shih specify that said user interface software is divided in a basic module and a user interface module. But these limitations have been addressed in claim 1 above.

As per claims 16-20, refer to respective rejections of claims 2-6.

As per claim 21, this corresponds to claim 7, hence is rejected using the corresponding rejections as set forth therein; and further recites means capable of stopping the loading between the loading of the basic module and user interface module. This limitation has been addressed in claim 15 above.

As per claims 22-27, refer to respective rejections of claims 8-13.

As per claim 28, this is a storing means version of claim 15, hence is rejected using the corresponding rejections as set forth therein, the storing means being inherent in a processing unit like the computing system as taught by Shih.

Response to Arguments

10. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (703)305-7207. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662.

Any response to this action should be mailed to:
Commissioner of Patents and Trademarks

Art Unit: 2124

Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or: (703) 746-8734 (for informal or draft communications, please consult Examiner before using this number)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. , 22202. 4th Floor(Receptionist).

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VAT

April 25, 2004

A handwritten signature in black ink, appearing to read 'TODD INGBERG', with a long, sweeping line extending from the end of the signature.

**TODD INGBERG
PRIMARY EXAMINER**